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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,059	07/11/2003	Brian J. Schwartz	EH-10937 (03-358)	4332

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NEW HAVEN, CT 06510

EXAMINER

SHAKERI, HADI

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/618,059	Applicant(s) SCHWARTZ ET AL.	
	Examiner Hadi Shakeri	Art Unit 3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the machining tool as claimed in combination in the new claims must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. The scope of claim 9, clearly defined per Applicant as now of record, fails to further limit the parent claim. The language is narrative and describes what may be possible as to how a stream may behave in the nozzle; it does not limit the parent claim with any additional structures and/or element.

Claim Rejections - 35 USC § 112

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3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 9 recites the limitation "the quill" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

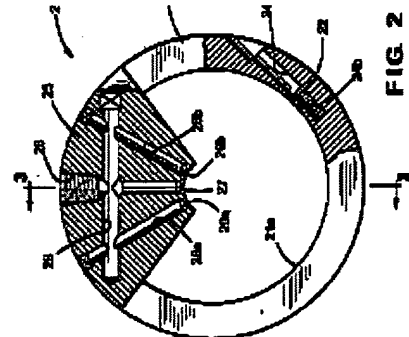
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 10-12 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Reitmeyer (6,471,573).

Reitmeyer discloses all of the limitations of claims 10 and 20, i.e., a coolant nozzle having at least one coolant inlet (26); a plurality of coolant outlet (27, 29a, 9b) oriented to discharge coolant obliquely (Fig. 3) arranged with circumferential spacing of no more than 72 degrees.

Regarding claims 11, 12, Reitmeyer meets the limitations, i.e., common radial position at unique angle; not more coolant outlet than the one circumferentially positioned.



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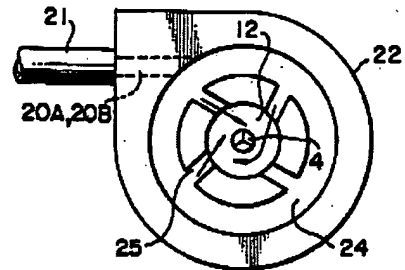
Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-9 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai et al. in view of Perkins et al. (4,252,768).

Arai et al. meets all of the limitations of claims 1 and 16, except for the type of material used for the nozzle. Although, Choice of material is considered to be an obvious modification, Perkins et al. is cited which disclosed using sintered ceramic nozzle for its desired properties (03:35-43). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Arai et al by using sintered ceramic as taught by Perkins et al. for its desired properties, e.g., durable, light...



Regarding claim 16, the narrative language, i.e., "discharging a plurality of...impacting obliquely..." lacking any structural limitations for the nozzle, e.g., "oriented to" is considered met. With regards to combination with a quill, the nozzle of Arai et al. in view of Perkins et al. is capable of being used in combination with a quill, thus the combination is considered obvious to one of ordinary skill in the art, depending on the workpiece and/or operational parameters.

Regarding claims 3-6, 9, 15, 17 and 18, Arai et al. in view of Perkins et al. meets the limitations.

Regarding the number of outlets, and the size, Arai et al. indicates in col. 6, line 43 that the size and number of the apertures are not limited to the embodiments shown and can be set

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at desired values, and the size of the opening (12) obviously depends on the size of the tool. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have five passages and/or have opening of less than 3 cm, since it has been held that changing shape, dependent on work-piece parameters, involves only routine skill in the art. *In re Stevens*, 101 US PQ 284(CCPA1954).

10. Claims 13, 16, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reitmeyer.

Reitmeyer meets all of the limitations of above claims, except for the number of outlets, the size and the combination with a quill, all obvious modifications as indicated above in section 6.

11. Claims 1-9, 14, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reitmeyer in view of Perkins et al.

Reitmeyer in view of Perkins et al., modification in light of choice of material used, as indicated above in section 6, meets the limitations.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

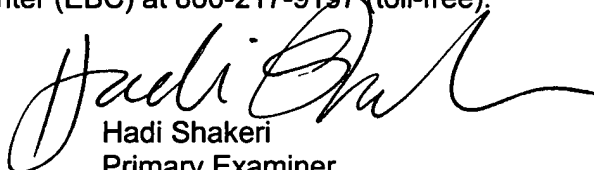
13. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

It is noted, however, with regards to arguments against Reitmeyer, the complexity of the structures, single unitary piece, highly localized outlets, and the spacing of no more than 72 degrees, fail to indicate what claims' limitations are not (would not) be met. Since the outlets are grouped less than 72 degrees apart, outlets provide a redundant coverage around the circumference of the tool (although may not be around all of the circumference, which would be met as applied to claim 13, i.e., Reitmeyer clearly discloses that the number may be more or less) and since the structure as shown in Fig. 3 is considered to meet the limitations of single unitary piece, as defined by the specification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is (571) 272-4495. The examiner can normally be reached on Monday-Friday.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hadi Shakeri
Primary Examiner
Art Unit 3723
December 22, 2004